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# United States Department of Agriculture, BUREAU OF ENTOMOLOGY.

## THE PERIODICAL CICADA IN 1914.

Information is desired on the subject of the occurrence of Brood V of the periodical cicada (*Tibicen septendecim* L.) (fig. 1.) to supplement and complete our knowledge of the distribution of this brood.

The known distribution of this brood is indicated in the accompanying map (fig. 2). The brood occupies, in the main, a rather compact territory, lying chiefly in Ohio and West Virginia, with a few



FIG. 1.—The periodical cicada (*Tibicen septendecim*): a, Adult; b, same, side view; c, shed pupal skin. Natural size. (Author's illustration.)

scattering colonies in Pennsylvania and Virginia. Some of the southern West Virginia records are open to doubt, as are also some of the records in Virginia. The distribution of this brood by States and counties, as listed below, is based on records running back more than 100 years and particularly on studies in 1897 in Ohio by Prof. F. M. Webster and in West Virginia by Dr. A. D. Hopkins, together with numerous records obtained by this bureau.

### DISTRIBUTION BY STATES AND COUNTIES.

OHIO.—Ashland, Athens, Belmont, Carroll, Columbiana, Coshocton, Crawford, Cuyahoga, Delaware, Erie, Fairfield, Franklin, Gallia, Geauga, Guernsey, Harrison, Hocking, Holmes, Huron, Jackson, Jefferson, Knox, Lake, Licking, Lorain, Mahoning,



Medina, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pickaway, Pike, Portage, Richland, Ross, Sandusky, Scioto, Seneca, Stark, Summit, Tuscarawas, Vinton, Washington, Wayne.

PENNSYLVANIA.—Fayette, Greene, Washington.

VIRGINIA.—Augusta, Caroline, Highland (?), Shenandoah.

WEST VIRGINIA.—Barbour, Boone, Braxton, Brooke, Calhoun, Clay, Doddridge, Fayette, Gilmer, Grant, Greenbrier (?), Hancock, Hardy, Harrison, Jackson, Kanawha, Lewis, Marion, Marshall, Mason, Mineral, Monongalia, Nicholas, Ohio, Pleasants, Pocahontas, Preston, Putnam, Randolph, Ritchie, Roane, Summers (?), Taylor, Tucker, Tyler, Upshur, Wayne, Webster, Wetzel, Wirt, Wood.



FIG. 2.—Map showing distribution of Brood V, 1914.

### GENERAL CONSIDERATIONS.

The periodical cicada is so well known that a general account of it in this place is unnecessary. When it appears in great numbers it naturally causes considerable alarm and arouses fears for the safety of shade trees and orchards. The actual damage, however, is usually slight, except in the case of newly planted orchards, and even here, by vigorous pruning back after the cicada has disappeared, much of the injury caused by the egg punctures (fig. 3) can be obviated.

Ordinary repellent substances, such as kerosene emulsion or carbolic-acid solutions, seem to have very little effect in preventing the oviposition of these insects. Some recent experience, however, indicates that trees thoroughly sprayed with Bordeaux mixture or a lime wash are apt to be avoided by the cicada, especially if there are other



trees or woods in the neighborhood on which they can oviposit. The most reliable means of protecting nurseries and young orchards is by collecting the insects in bags or umbrellas from the trees in early morning or late evening, when they are somewhat torpid. Such collections should be undertaken at the first appearance of the cicada and repeated each day.

The recipient of this notice is urgently requested to report, *about June 10*, on the inclosed postal card, any occurrences of this insect. The cicadas may be expected to emerge from the middle to the end of May, and scattering individuals may be found up to the middle of June. Any cicadas collected later than June will probably belong to other species, and wherever the observer is in doubt it will be well to send specimens for determination. A negative record is often quite as valuable as one of actual occurrence. The card should be filled out with the name of the locality, including the State, county, and town, the name of the observer, and the date. Space is left at the bottom of the card for a note on any features of interest, and the information given should include the date of first appearance or emergence of the cicada, the date of its general disappearance, and the numbers—in other words, whether very numerous or scattering, or whether only a few individuals occur. No postage is necessary on this card.

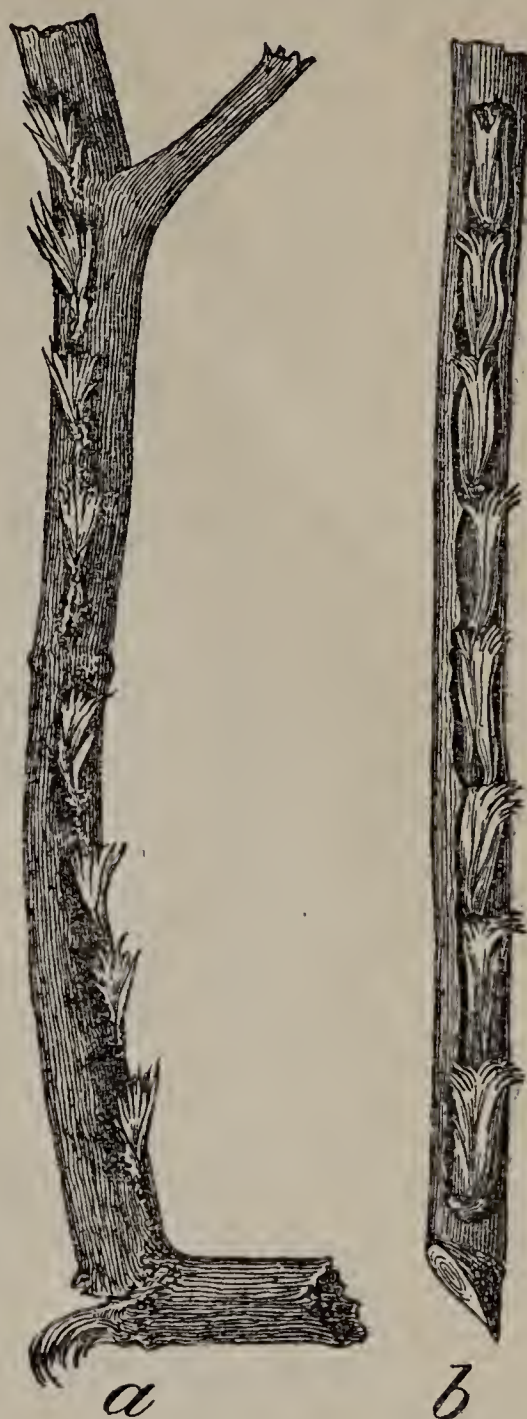


FIG. 3.—Egg punctures of the periodical cicada: *a*, Twig showing recent punctures, from front and side, and illustrating manner of breaking; *b*, twig showing older punctures, with retraction of bark and more fully displaying the arrangement of fibers. Natural size. (After Riley.)

C. L. MARLATT,  
*Entomologist and Acting Chief in Absence of Chief.*

Approved:

L. O. HOWARD,

*Entomologist and Chief of Bureau.*

WASHINGTON, D. C., May 12, 1914.



